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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/809,936	03/26/2004	Takeshi Naka	Q80739	6424
23373	7590	04/26/2006	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			RILEY, SHAWN	
			ART UNIT	PAPER NUMBER
			2838	

DATE MAILED: 04/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/809,936	Applicant(s) NAKA ET AL.	
	Examiner Shawn Riley	Art Unit 2838	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 5 and 6 is/are rejected.
- 7) ☒ Claim(s) 2-4 and 7-9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 August 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____.  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>aug 2004</u> .  | 6) <input type="checkbox"/> Other: ____.                                    |

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to because figure(s) 1 and 2 fail(s) to have the label prior art. Correction is required.

### *Claim Rejections - 35 U.S.C. § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 5-6 are rejected under 35 U.S.C. §102(b) as being fully anticipated by Bayer et al. (U.S. Patent 6,392,904 et al. shows,<sup>1</sup> (in, e.g., the(ir) figures and corresponding disclosure)

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<sup>1</sup> Note claims will be addressed individually and the material in parentheses are the examiner's annotated comments. Further unless needed for clarity reasons, recited limitation(s), will be annotated only upon their first occurrence. Annotated claims begin with the phrase "As to claim". Claims that are not annotated are seen as having already had the invention(s) addressed previously in an annotated claim and may be repeated for convenience of the applicant/examiner. Bolded words/phrases indicate rejected material based 112 paragraph rejections. Underlined words/phrases indicate objected to material. For method claims, note that under MPEP 2112.02, the principles of inherency, if a prior art device, in its normal and usual operation, would necessarily perform the method claimed, then the method claimed will be considered to be anticipated by the prior art device. When the prior art device is the same as a device described in the specification for carrying out the claimed method, it can be assumed the device will inherently perform the claimed process. In re King, 801 F.2d 1324, 231 USPQ 136 (Fed. Cir. 1986). Therefore the previous rejections based on the apparatus will not be repeated.

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As to claim 1;

A stabilized power supply circuit comprising: a charge pump power supply circuit including a plurality of switches (S1-S4) and a capacitor (C<sub>pump</sub>), wherein, through combination of selective on and off operations of the individual switches, the charge pump power supply circuit accumulates electric charge in the capacitor and outputs, as output voltage, voltage generated upon accumulation of electric charge (see, e.g., column 3 lines 59 through column 5 line 8); and an error amplifier (6) comparing the output voltage (V<sub>out</sub> through R1/R2) and a predetermined reference voltage (V<sub>ref</sub>) and outputting an error signal on the basis of the difference between the output voltage and the reference voltage, wherein at least one of the switches of the charge pump power supply circuit is constituted by a field effect transistor (shown as N-MOSFETs); and a period during which electric charge is charged into or discharged from a gate of the field effect transistor is controlled in accordance with the error signal in order to maintain the output voltage constant.

As to claim 5;

A stabilized power supply circuit comprising: a charge pump power supply circuit including. A plurality of switches and a capacitor, wherein, through combination of selective on and off operations of the individual switches by means of clock pulses, the charge pump power supply circuit accumulates electric charge in the capacitor and outputs, as output voltage, voltage generated upon accumulation of electric charge; and

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an error amplifier (6) comparing the output voltage and a first reference voltage and outputting an error signal on the basis of the difference between the output voltage and the first reference voltage, wherein at least one of the switches of the charge pump power supply circuit is controlled in accordance with the error signal in order to maintain the output voltage constant; and the voltage of the error signal is compared with a second reference voltage, and when the difference between the voltage of the error signal and the second reference voltage is equal to or less than a predetermined value, the charge pump operation performed through selective on and off operations of the individual switches by means of the clock pulse is stopped.

6. A stabilized power supply circuit comprising: a charge pump power supply circuit including a plurality of switches and a capacitor, wherein, through combination of selective on and off operations of the individual switches by means of clock pulses, the charge pump power supply circuit accumulates electric charge in the capacitor and outputs as output voltage, voltage generated upon accumulation of electric charge; and an error amplifier comparing the output voltage and a first reference voltage and outputting an error signal on the basis of the difference between the output voltage and the first reference voltage, wherein at least one of the switches of the charge pump power supply circuit is constituted by a field effect transistor; and a period during which electric charge is charged into or discharge: from a gate of the field effect transistor is controlled in accordance with the error signal in order to maintain the output voltage constant; and the voltage of the error signal is compared with a second reference voltage, and when the difference between the second reference voltage of the error signal and the second reference voltage is equal to or less than a predetermined value, the charge pump operation performed through selective on and off operations of the individual switches by means of the clock pulses is stopped.

*Allowable Subject Matter*

3. Claims 2-4 and 7-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. As allowable subject matter has been indicated, applicant's response must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 C.F.R. § 1.111(b) and section 707.07(a) of the M.P.E.P.

5. The following is an examiner's statement of reasons for allowance: As to claim 2, no prior art uncovered anticipates or renders obvious applicant(s) claimed stabilized power supply circuit including and the period during which electric charge is charged into or discharged from the gate is controlled by controlling the current source in accordance with the error signal output from the error amplifier.


Further, as to claim 7, no prior art uncovered anticipates or renders obvious applicant(s) claimed stabilized power supply circuit including the period during which electric charge is charged into or discharged from the gate is controlled by controlling the current source in accordance with the error signal output from the error amplifier.

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### *Conclusion*

Any inquiry from other than the applicant/attorney of record concerning this communication or earlier communications from the Examiner should be directed to the Patent Electronic Business Center (EBC) at 1.866.217.9197. Any inquiry from a member of the press concerning this communication or earlier communications from the Examiner or the application should be directed to the Office of Public Affairs at 703.305.8341. Any inquiry from the applicant or an attorney of record concerning this communication or earlier communications from the Examiner should be directed to Examiner Riley whose telephone number is 571.272.2083. The Examiner can normally be reached Monday through Thursday from 7:30-6:00 p.m. Eastern Standard Time. The Examiner's Supervisor is Karl Easthom who can be reached at 571.272.1989. Any inquiry about a case's location, retrieval of a case, or receipt of an amendment into a case or information regarding sent correspondence to a case **should be directed to 2800's Customer Service Center** at 571.272.2815. Any papers to be sent by fax MUST BE sent to fax number **571-273-8300**. Any inquiry of a general nature of this application should be **directed to the Group receptionist** whose telephone number is 571.272.2800. Status information of cases may be found at <http://pair-direct.uspto.gov> wherein unpublished application information is found through private PAIR and published application information is found through public PAIR. Further help on using the PAIR system is available at 1.866.217.9197 (Electronic Business Center).

April 2006

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**Shawn Riley**  
**Primary Examiner**